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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,753	02/11/2002	Romel Khan	209378US67	5591
22850	7590	06/01/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			NGO, NGUYEN HOANG	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No. ☒

09/683,753

Applicant(s)

ROMEL KHAN

Examiner

Nguyen Ngo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.  
  
Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

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- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

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- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The applicant has failed to provide indentation to claims where each element or steps of the claim should be separated by a line indentation.

### ***Claim Objections***

2. The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

3. Claims 10 and 16 are objected to because of the following informalities:

As for claim 10: The "indicating that (1) the another switch is functioning properly" in line 3 should be - indicating that (1) another switch is functioning properly-.

The Examiner believes that there might be a typographical error.

As for claim 10: The "behalf of the another switch by emulating the address of the another switch when the another switch is experiencing difficulty, wherein the switch

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and the another switch" in lines 6-7 should be - behalf of another switch by emulating the address of another switch when another switch is experiencing difficulty, wherein the switch and another switch-.

The Examiner believes that there might be a typographical error.

As for claim 16: The "switch as claimed in claim 6" in line 1 should be - switch as claimed in claim 15.

The Examiner believes that there might be a typographical error. Claim 6 refers to the computer program product and not the switch.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being anticipated by Skoog et al. (US 6,081,591), in view of Li et al. (US 5,473,599), hereinafter referred to as Skoog and Li.

**Regarding claim 1**, Skoog discloses of signaling network gateway devices generally be implemented using a processor or a computer controlled using software (computer storage medium and a computer program code mechanism, col8 lines 41-43) where signaling information will be exchanged between signaling network gateway device and certain STP (switch to control redundant signaling information, col7 lines 2-5). Skoog further discloses:

that the redundant signaling network gateway devices include a signaling network gateway 12, that operates as a primary, and a signaling network gateway device 14, that operates as a backup or secondary (identify a first switch for which a second switch is to act as a backup, 12 and 14 of figure 1 and col5 lines 45-50).

that information is exchanged between signaling gateway device 12 (primary switch) and signaling gateway device 14 (backup switch) through a link. This information includes state of health information, configuration verification information, traffic assurance information, traffic statistics information, and usage based billing information (receive periodic messages indicating that the first switch is functioning properly or receive a message indicating that the first switch is experiencing difficulty correlating to state of health information, col5 lines 50-64).

that each of the elements and end points of the signaling network be identified and addressed using unique point codes (col6 lines 1-5). Skoog further discloses that the network gateway devices are shown as being implemented as part of a local central office but can in fact be implemented separately (the first and second switches are remotely located and independently addressable, col6 lines 60-64).

Skoog however fails to disclose of the specific limitation of having the second switch configured to emulate the address of the first switch and route calls on behalf of the first switch when the first switch is experiencing difficulty. Skoog does disclose that a smooth transition between signaling network gateway device 12 (primary) and signaling network gateway device 14 (backup) is needed in the event that control must be changed from primary to backup, in order to increase the overall availability of a signaling network (col5 lines 58-64) providing the motivation for a smooth transition from a primary switch to a backup switch.

Li discloses of a "standby" router that backs up the active router so that if the active router becomes inoperative, the standby (backup) router automatically begins emulating the active router (second switch configured to emulate the address of the first switch and route calls on behalf of the first switch when the first switch is experiencing difficulty, col2 lines 25-30). It will thus be obvious to a person skilled in the art to incorporate the signaling network gateway device and method for use in a signaling network disclosed by Skoog with the method of having the backup router emulate the



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active router disclosed by Li to have a smooth transition between a primary signaling network gateway device and a backup signaling network gateway device in case of failure.

**Regarding claim 2**, Skoog discloses that information is exchanged between signaling gateway device 12 (primary switch) and signaling gateway device 14 (backup switch) through a link. This information includes state of health information, configuration verification information, traffic assurance information, traffic statistics information, and usage based billing information (receive a message indicating that the first switch is experiencing congestion correlating to the traffic statistics information, col5 lines 50-64).

**Regarding claim 3**, Skoog and Li disclose all the limitations as discussed with claim 2. That the information includes state of health information, configuration verification information, traffic assurance information, traffic statistics information, and usage based billing information (receive a message indicating that the first switch is experiencing an error correlating to the state of health information, col5 lines 50-64).

**Regarding claim 4**, Skoog discloses signaling network gateway device 12 (primary) may exchange signaling information with a local digital switch and STP (receive a message intended for the first switch, col7 lines 45-48). The limitation of receiving a message indicating that the first switch is experiencing difficulty has already been discussed in claim 1.

**Regarding claim 5**, Skoog fails to disclose the specific limitation of receiving a message from the first switch when the first switch is no longer experiencing the difficulty.

Li however discloses of a hello message, which includes a router priority, a router status, and the group virtual address. Thus, the listening routers can determine a speaking router's status. If a new router no longer hears hello messages issuing from the active or standby router, it can assume that router is no longer operational (receive a message from the first switch when the first switch is no longer experiencing the difficulty, col3 lines 2-10). It will thus be obvious to a person skilled in the art to incorporate the signaling network gateway device and method for use in a signaling network disclosed by Skoog with the method of providing hello messages disclosed by Li, to effectively alert the backup switch when the primary switch is no longer inoperative or having difficulty.

**Regarding claim 6**, Skoog discloses that the signaling network be implemented as a Signaling System 7 (SS7) network and the signaling network gateway device may exchange signaling information in a first format, SS7 signaling protocol (configured to receive SS7 messages, col7 lines 45-48).

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**Regarding claim 7**, Skoog discloses that each of the elements and end points of the signaling network be identified and addressed using unique point codes (configured to receive SS7 messages using point code as addresses, col6 lines 1-5).

**Regarding claim 8**, Skoog discloses that the signaling end point be referred to as an access element and includes any element or node (voice gateways) capable of receiving or exchanging signaling information, either directly or indirectly, with a user and with a signaling network gateway device (first and second switches control first and second sets of voice gateways when the first and second switches are not experiencing difficulty, col6 lines 3-8). From figure one, it should be obvious to a person skilled in the art that signaling gateway device 12 (primary) control a set of access elements (first set) and signaling gateway device 14 (backup) control a set of access elements (second set).

**Regarding claim 9**, Skoog discloses a signaling network gateway 12, that operates as a primary, and a signaling network gateway device 14, that operates as a backup or secondary (identify a first switch for which a second switch is to act as a backup, 12 and 14 of figure 1 and col5 lines 45-50). It should therefor be obvious that signaling network gateway device 14 (backup) be able to control both of the first and second sets access elements when signaling network gateway device 12 (primary) is experiencing difficulty as gateway device 14 is the backup to gateway device 12.

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**Regarding claim 10**, it is noted that claim 10 simply refers to the apparatus (switch) of the method (computer program) stated in claim 1. Skoog discloses of a signaling network gateway device (switch) that will be implemented using a processor or a computer controlled using software (col8 lines 41-44). As mention with the application, a computer system is used for controlling the switching and of at least one of the SSCs, STPs and GWs according to the present invention (Application page 14 paragraph [0095]). It should therefor be obvious that the network gateway device disclosed by Skoog contains:

a memory for identifying a signaling network gateway 12, that operates as a primary, and a signaling network gateway device 14, that operates as a backup or secondary (memory to identify another switch for which the switch is to act as backup, 12 and 14 of figure 1 and col5 lines 45-50).

a receiver for the use of exchanging between signaling gateway device 12 (primary switch) and signaling gateway device 14 (backup switch) through a link. This information includes state of health information, configuration verification information, traffic assurance information, traffic statistics information, and usage based billing information (receiver configured to receive periodic messages indicating that (1) another switch is functioning properly and (2) the first switch is experiencing difficulty correlating to state of health information, col5 lines 50-64).

a controller for controlling the switch to route calls on behalf of another. Skoog also discloses the signaling gateway control unit controls the exchange of signaling information (col8 lines54-55). Skoog further discloses that each of the elements and

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end points of the signaling network be identified and addressed using unique point codes (col6 lines 1-5). Skoog further discloses that the network gateway devices are shown as being implemented as part of a local central office but can in fact be implemented separately (wherein the switch and another switch are remotely located and independently addressable, col6 lines 60-64).

Skoog however fails to disclose of the specific limitation of controlling the switch to route calls on behalf of another switch by emulating the address of another switch when another switch is experiencing difficulty. Skoog does disclose that a smooth transition between signaling network gateway device 12 (primary) and signaling network gateway device 14 (backup) is needed in the event that control must be changed from primary to backup, in order to increase the overall availability of a signaling network (col5 lines 58-64) providing the motivation for a smooth transition from a primary switch to a backup switch.

Li discloses of a "standby" router that backs up the active router so that if the active router becomes inoperative, the standby (backup) router automatically begins emulating the active router (by emulating the address of another switch when another switch is experiencing difficulty, col2 lines 25-30). It will thus be obvious to a person skilled in the art to incorporate the signaling network gateway device (more specifically the controller) and method for use in a signaling network disclosed by Skoog with the method of having the backup router emulate the active router disclosed by Li to have a

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smooth transition between a primary signaling network gateway device and a backup signaling network gateway device in case of failure.

**Regarding claim 11**, Skoog and Li disclose all the limitations as discussed with claims 10 and 2. It is noted that claim 11 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 2.

**Regarding claim 12**, Skoog and Li disclose all the limitations as discussed with claims 10 and 3. It is noted that claim 12 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 3.

**Regarding claim 13**, Skoog and Li disclose all the limitations as discussed with claims 10 and 4. It is noted that claim 13 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 4.

**Regarding claim 14**, Skoog and Li disclose all the limitations as discussed with claims 10 and 5. It is noted that claim 14 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 5.

**Regarding claim 15**, Skoog and Li disclose all the limitations as discussed with claims 10 and 6. It is noted that claim 15 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 6.

**Regarding claim 16**, Skoog and Li disclose all the limitations as discussed with claims 10 and 7. It is noted that claim 16 simply refers to the apparatus (switch, more specifically it's receiver) of the method (computer program) stated in claim 7.

**Regarding claim 17**, Skoog and Li disclose all the limitations as discussed with claims 10 and 8. It is noted that claim 17 simply refers to the apparatus (switch) of the method (computer program) stated in claim 8.

**Regarding claim 18**, Skoog and Li disclose all the limitations as discussed with claims 10 and 9. It is noted that claim 16 simply refers to the apparatus (switch) of the method (computer program) stated in claim 9.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) McGrew (US 6,327,260) Controlled Routing To a Plurality of Signaling Interfaces At A Single Telephone Switch.
- b) Whiting et al. (US 6,456,626) Method of Virtual Circuit Reconnection Without Loss Of Call Session.

- c) Mintz et al. (US 5,915,013) Method And System For Achieving Routing Of Signaling Information.
- d) Fourcand et al. (US 6,778,491) Method And System For Providing Redundancy For Signaling Link Modules In A Telecommunication System.
- e) Brewer et al. (US 6,711,357) Timing And Synchronization For An IP Router Using an Optical Switch.
- f) Kicklighter (US 6,005,841) Redundancy Arrangement For Telecommunications System.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Ngo whose telephone number is (571) 272-8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NN  
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**Nguyen Ngo**

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**PRIMARY EXAMINER**  
5/31/05